The hall, such as we have described it, is found in every old English mansion down to the Elizabethan period; and there is scarcely any finer example left than that of Longleat, in spite of its Italianized exterior. But about that time, or still earlier, the nobles began to disuse the custom of dining in company with their retainers and household in the great hall, and a separate apartment was reserved for the use of the family, and called the dining-parlour, or banqueting-room.

The *chapel* was another principal feature in the early English residence of every class. It usually formed one side of the first court, and was occasionally quite detached from the main building. Both the hall and chapel were often overlooked from windows in galleries and upper rooms.

The other apartments were the *great chamber*, or *withdrawing-room*, usually reserved for state occasions, and hung with tapestry, and the *gallery*, appropriated to the reception of visitors, to amusement, and in-door exercise. The gallery was a long room with several bay or oriel windows, projecting externally, and forming agreeable nooks for private conversation. It was ofteo embellished with royal or family portraits, maps, and geoealogical tables. The larger houses had, in addition to these apartments, the *parlours*—sometimes divided into summer and winter rooms. Of these, some were hung with arras, others wainscotted in small panels of richly-grained oak. The ceilings were framed into panels by moulded ribs, enriched with bosses and pendants at their intersections. When plaster was substituted for timber in the ceilings, the patterns became more intricate, and the ornaments still more numerous.

The *staircase* in the older houses was carried up in a separate turret, generally circular, the steps being of stone, running round a central pillar, and the outer handrail grooved into the substance of the wall. In the reign of Elizabeth, staircases first became splendid ornamental features in houses, being framed of wood, enriched with massive handrails and balustrades curiously carved, as also were the bracketted string-boards and soffits. The newels at every landing supported the figures of heraldic animals or other devices, as well as pendant ornaments at their lower extremity. The effect of these elaborate staircases was highly ornamental and characteristic; and their introduction is always advisable when that style of building is attempted.

That the whole interior of a modern house should be made to correspond precisely with the external architecture is unnecessary, and would be highly inconvenient. The space occupied by the great hall would be thrown away on an apartment now never applied to its ancient purposes, from the total change in domestic habits. It is for this reason, that the attempt to give the appearance and proportions of the ancient hall to the modern vestibule, which goes by that name, is usually a failure. The idea of fitness and utility is wanting. The room we know not to be applied to the purposes of the old hall, and the association is therefore injured, if not destroyed. The gallery is, perhaps, one of the characteristic features of old interiors most suited for adoption in our modern residences. When employed as a corridor for communication with the principal range of apartments, whether below stairs or above, it becomes equally ornamental and useful. Its lofty embayed windows, emblazoned with armorial coats, its vaulted or fretted ceiling, with the full-length portraits, old high-backed chairs, couches, and cabinets, which form the appropriate furniture of its walls, compose a rich substitute for the more homely passage, and an agreeable place for indoor exercise and amusement.

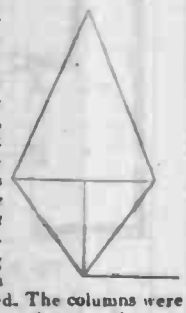
A Window in Custody.—A few weeks ago a gentleman in Bakewell having to make some alterations in one of his houses, applied to a mason to take out a very large shop window, which was immediately done; but instead of taking the window out of the house, the mason put it inside, and replaced it with a much smaller. He completely forgot how the large window was to be got out, and proceeded at once to make all right with mallet and tool. To the gentleman's mortification, he found the large shop window in safe custody and so it remains. The new window will have to be taken out again, or else the large shop window must be taken to pieces before it can be got outside.

MASONS' MARKS.

Sir,—I have been a subscriber to The Builder since its commencement. I have watched its progress carefully, and read it with pleasure. On its appearance, I certainly thought you were, like a great many others, pretending to be of the craft, but really I do honestly think you are one of us, and as such, I heartily and sincerely wish you success.

Being bred a mason, I was forcibly struck with an article in No. 30 entitled, "Masons' Marks," in which the writer identifies their uses as belonging to the ancient order of Freemasons. This has been long my opinion, and I know a great number of the old marks to bear a close approximation thereto, for when a boy, carrying the tools to the smithy, I could almost tell the difference between a good and bad mason by the appearance of his tools. I am, however, in possession of some facts regarding masons' marks which I shall relate, and, if you think them worth your notice, you may make what use you please of them.

About fifty years ago, the late Earl of Bristol, Lord Bishop of Derry, built a spendid episcopal palace at a place called the Ballyscullion, in the County of Derry; it was scarcely finished when he died, and it was taken down and the materials sold. Among other splendid specimens of masoonry (for he had carvers from Italy, &c.) he brought *entire*, out of the ruins of Herculaneum, ten beautiful columns of Sienna marble of the Corinthian order, with statuary, capitals, and bases, 13 feet high in the shaft, and 18 inches diameter; they were of a pale kind of Sienna with red streaks, and very handsome, but the gallery in which he intended placing them not being finished, they lay till the cases were rotted about them; no person knew their value, and about seventeen years ago the remains of them were purchased from the bishop's heirs for a small sum, by Mr. Alexander, of Portglenon, and I manufactured them into columns and antæ for his hall, and chimney-pieces for his house. In examining them I found "masons' marks," I dare say nearly 3,000 years old!!! They must have been about that, or older. It is a fact, known to masons at this day, that in working a column, the mason puts his mark on the front of the head, to denote the handsomest and soundest front, no matter whether it is at a diagonal line or no, and this I found invariably the case. The marks were generally Greek letters, but on four of them this mark was quite plain, with the addition of the lower score on two of them. The Greek Delta was, I think, on three, and different Greek characters on the rest. I also found patches inserted with cement, *the identical kind we use at present*, for I had it analyzed, except it being mixed with the reddish part of the Sienna, pounded. The columns were one-third up from the bottom the same diameter as the lower cincture, and were exceedingly well and true worked, the scotia being beautifully hollowed; but a strange fact still I have to relate, that on the ends were the mark of a hack tool. Now, I remember the first introduction of such a tool here about twenty years ago by myself, to work Galway marble, since which it has been used for Stanty stones, and is considered a great improvement, so that the use of it must have been known at that time; in corroboration of this, I read some years ago, I think in the *Lancet*, of a surgeon's shop or house having been discovered in Herculaneum, and on the body of the occupant were his surgical instruments, one of which was a fac-simile of an instrument for which a patent had been secured but a short time ago for cutting in fistula, or some such disorder.



I remain, Mr. Editor,
Your obedient servant,
J. J.

Steam Marble Works, Great Patrick-street,
Belfast, Sept. 18, 1843.

The restoration of York Minster is proceeding in the most satisfactory manner. The expectation is that the whole work will be completed by the next spring.

METHOD OF SILVERING CAST-IRON.

AS PRACTISED BY MAJOR JEWREINOFF AT ST. PETERSBURGH.

The combination of iron with carbon (cast-iron) from the ease with which it melts, and the consequent possibility of taking the finest impressions of form, has come into very extensive application. The art of founding converts cast-iron into enormous arches, columns, cannons, and also into the most delicate bracelets, ear-rings, &c. Unfortunately the moist atmosphere very soon alters the surface of these objects, and it is found necessary to coat them with paint, which gives the cast-iron, the colour of which is itself not very attractive, the appearance of mourning. In the present state of the art of founding, cast-iron might easily be substituted for bronze, were it not for its sombre appearance, which entirely excludes it. This disadvantage may, however, be entirely overcome, from the possibility of plating it with silver; in fact, cast-iron may be readily silvered, and equally as well as copper and bronze. Some successful experiments which I have made on this subject, induce me give a short description of the method which I have employed. The liquid for silvering is prepared in the following manner:—Cyanide of potassium, prepared according to Liebig's method, is introduced into a stoppered vessel, and freshly-prepared pure chloride of silver, still in a moist state, added; the whole being covered with water, and shaken violently for some time at the ordinary temperature. An excess of chloride of silver is taken, and should a small quantity of it remain undissolved, a few pieces more of the cyanide are added after some time, taking care however, to avoid having an excess of the latter salt, but always a small quantity of undissolved chloride at the bottom of the vessel. This last circumstance is important, because when the liquor contains too much free cyanide of potassium, it is easily decomposed, and, moreover, does not silver so well. Before employing it, it is filtered, and is thus rendered perfectly clear, iron and a little chloride of silver remaining on the filter. I effect the plating by means of a galvanic battery of one pair, consisting of zinc and a coke cylinder, which are separated from each other by means of an earthen diaphragm. The pair are placed in a glass vessel containing dilute sulphuric acid, and dilute nitric acid is conveyed into the earthern diaphragm. Experience has shewn me that the best mixture for the coke cylinders should consist of five parts by weight of finely pulverized coke, and eight parts pulverized coal, and two parts common rye flour. When the cylinders are dry, they are placed in earthen crucibles, in the lids of which there is an aperture for the escape of the gases, and are then heated to redness. Those cast-iron objects may be most easily silvered which have not been painted, as the removal of the paint from the surface of the metal is somewhat difficult. The cleansed object is immersed in the silver solution, and connected with the zinc pole by means of a conducting wire, and a platinum plate immersed in the liquid at some distance from the object to be silvered, and connected with the coke cylinder. A plate of cast-iron, of four square inches surface, is generally completely plated in thirty minutes.—*Bulletin de St. Petersbourg.*

Substitute for Iron in the Manufacture of Rails.—The *Journal des Chemins de Fer* says.—"An inventor announces that he has found a composition which will reduce to a mere trifle the price of rails for railroads. He replaces the iron by a combination of Kaolin clay (that used for making pottery and china) with a certain metallic substance, which gives a body so hard, as to wear out iron, without being injured by it in turn. 100 kil. of this substance would cost less than 15f., and would furnish 2½ metres of rail. The Kaolin clay is abundant in France, and the valley of the Somme contains immense quantities of it."

London and its Extent.—London, which extends its intellectual, if not its topographical identity from Bethnal-green to Turnham-green (ten miles); from Kentish-town to Brixton (seven miles), whose houses are said to number upwards of 200,000, and to occupy twenty square miles of ground, has a population of little less than 2,000,000 of souls, or rather mouths. Its leviathan body is composed of nearly 10,000 streets, lanes, alleys, squares, places, terraces, &c.